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Please do not include confidential information in your response as all responses are considered public information.

Name: Janell Hansen
Organization: Marne & Elk Horn Telephone Company
Address: 4242 Main St., PO Box 120, Elk Horn, IA 51531
E-mail: Janell@metc.net
Phone: 712-764-6161

I. What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state?

Cost of deployment and willingness of price-cap carriers to build-out in rural areas

Monthly cost of service to adopters, primarily senior citizens and low income families.

Perceived relevancy to users—primarily senior citizens.

Cost of computer or device to access Internet, primarily low income families.

II. If you had to choose one *primary* barrier, what would that be?
Cost of deployment and willingness of price-cap carriers to build-out in rural areas.

III. What recommendations do you have to overcome these barriers?
Develop incentives for competitors to build out where the price-cap carriers will not. It's a tough business case to development broadband in rural areas without some kind of incentives.

IV. Other comments?

I think focusing adoption and use on low income families is important as well. Judging success based on adoption by senior citizens is not as important—for example we have

a large nursing home and many residents just aren't going to get a computer. That will come in time. Senior citizens are still important, to be clear, and there should be education for them—we offer classes locally and often work with the libraries to do the same.

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Name: Donald Jennings
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I. What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state?

Low density markets in the rural areas of Iowa are difficult, if not impossible to service without a high cost support system. There are many Iowa business located in rural areas that produce millions in sales contributing to Iowa tax base each year.

Availability of a quality high speed connection will increase the use of broadband because the customer can use the network more easily and experience less problems associated with an aged technology that will not support today's web based services for entertainment, education or health and other growing applications.

The ability to increase upload speeds supports home office applications for the teleworker, which allows the employee to work from home a few days a week. This lowers the stress on highways and the environment by reducing travel throughout the week.

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II.   **If you had to choose one *primary* barrier, what would that be?**
The customer must understand the benefits of the network to desire the service. That may be in a personal way such as sharing pictures of grandchildren, communicating with a relative who is deployed in the military or gathering information about a health issue that is affecting a member of the family. In a practical business manner by paying taxes online, printing copies of agriculture support application forms or answering question about cattle feed mixes.

III. **What recommendations do you have to overcome these barriers?**
For those that are the most resistant to internet literacy, the key is to show practical applications that you can use in everyday life, in places that you typically go. An example would be:

- A community college instructor/student in the nursing/dietary degree would present a broadband program at the local Hy-Vee cafeteria on ways you can improve your diet, research food allergies and store food items most effectively.

- A community college, where an instructor/student of the financial management degree would present a program showing the financial uses of the Internet such as online bill payments, access to your banking information and investments.

- At minimum a customer must have a computer and be willing to learn basic computer operation.
  - A computer recycling program could be funded and students in the IT courses at the community college could rebuild computers, learning methods and technics in their course work and make these available at low or no costs to get people online.

- A public-private partnership could be formed to subsidize the cost of internet access to students who met certain financial requirements. One school district in Minnesota partnered with their local provider and they provided students who met certain financial requirements, internet access at their home for one year. Under the program, the school paid 1/3, the provider paid a1/3 and 1/3 came from other sources. They found that once the students reached the end of the one year, over 80% kept the internet service following the end of the program.

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- **Other comments?**

A wired network is a requirement, although wireless mobility is also necessary. The wireless carriers encourage their customers to off load data on their wired home Wi-Fi network in order to reduce data traffic on the wireless network. This is driven by the limited amount of bandwidth available within the wireless license spectrum.

According to CISCO VNI Forecast, by 2016, annual global IP traffic is forecast to be 1.3 zettabytes – (a zettabyte is equal to a sextillion bytes, or a trillion gigabytes). This significant level of traffic growth and service penetration is driven by a number of factors, including:

  o **An increasing number of devices:** The proliferation of tablets, mobile phones, and other smart devices as well as machine-to-machine (M2M) connections are driving up the demand for connectivity. By 2016, the forecast projects there will be nearly 18.9 billion network connections—almost 2.5 connections for each person on earth, — compared with 10.3 billion in 2011
  o **More Internet users:** By 2016, there are expected to be 3.4 billion Internet users — about 45 percent of the world's projected population according to United Nations estimates.
  o **Faster broadband speeds:** The average fixed broadband speed is expected to increase nearly fourfold, from 9 megabits per second (Mbps) in 2011 to 34 Mbps in 2016.
  o **More video:** By 2016, 1.2 million video minutes—the equivalent of 833 days (or over two years) —would travel the Internet every second.
  o **Wi-Fi growth:** By 2016, over half of the world's Internet traffic is expected to come from Wi-Fi connections.

A quality broadband network in Iowa means economic development at several levels.
Maintaining the population in our rural communities requires the proliferation of teleworkers and home office works who reside in these communities. This allows people to work at home two or three days a week, reducing their fuel costs driving to the office, usually in a larger town 20 + miles away. With the Internet they can work for Facebook supporting cloud services from anywhere in the world.

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Name: Chris Hopp
Organization: Alpine Communications
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I. What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state? Access: The impacts of the recent FCC rulings have proven difficult to develop a construction schedule to bring truly high speed data to remote customers in our exchange areas. The lack of consumer demand for broadband (of any speed) makes it difficult to plan for network enhancements. Many consumers do not see a need to subscribe to a broadband service for many reasons. We currently participate in the FCC Lifeline Broadband Program. We provide virtually free service, training and access to low priced computers and have advertised this program heavily in our service areas. The program began in May and at this time we have only had 2 customers subscribe and a total of 3 inquired. This leads me to believe that consumers do not have a high demand for this service (we have also surveyed customers every year and the interest in broadband is just not there). I believe this to be one of the many differences between a broadband centric network and a voice network. The voice network was met with 100% demand for the need to communicate, making it a much more viable network to build.

II. If you had to choose one *primary* barrier, what would that be? Consumer Demand

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III.   What recommendations do you have to overcome these barriers? Continue to market the life improving benefits of Broadband. I believe in rural areas and Medical technologies continue to evolve and devices make it more practical for consumers to use broadband to fulfill medical needs (checkups, etc.) the demand for broadband will improve (especially in rural areas – it saves a trip and allows seniors to remain in their home longer).

IV.   Other comments? We (the industry and regulators) must decide what level of broadband we "need". Are you regulators accepting of different level of services (broadband speeds) in highly populated areas (New York city) and Rural areas (a farm 5 miles from town in Marquette, IA). Meaning, is it acceptable (and desired) to have a resident/business in New York have 100 meg service at $25, while that farmer has 6 meg service at $35?

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Name: Mark Thoma
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Phone: 641-592-6105

I.   What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state? Affordability for some customers

Education of broadband use

Some customers may not have access to computers

Funding for network build out and support

II.   If you had to choose one *primary* barrier, what would that be? A long term solution to fund the build out and provide ongoing support of our rural broadband networks. This is the most critical element to achieving the goal to provide broadband to all Iowans. Without access to a reliable and quality broadband network, all other barriers are null.

III.   What recommendations do you have to overcome these barriers? It is recommended to implement a long term support mechanism for the rural broadband networks. This support needs to allow rural carriers to build out and support their networks for all rural Iowans.

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IV.   Other comments? The uncertainty that the FCC has caused with their past decisions regarding the USF/ICC reform has caused many rural Iowa broadband provides to scale back or cease broadband deployment altogether. To make matters worse, future FCC orders are looming over our industry which only enhances our uncertainty to invest in future network upgrades.

I fully support the need to provide broadband to all Iowans but funding needs to be provided not just to deploy the service but the ongoing support for the service.

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Name: Roger Kregel
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I.   What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state?

It depends on what type of connection you want (wired or wireless) and do you want the same levels of service in rural as there is in urban? FYI – I define urban/rural as urban - within our small community or rural – outside our small community (acreages, farms, etc.)

Access – providers unable to build a business case for rural areas. A business case is built around the number of potential customers and rural areas do not have the numbers to support network build outs, upgrades and ongoing maintenance without some form of assistance, just like the telephone network was built out the last hundred years.

Adoption – some customers do not see relevance or need at this time. This will change with attrition.

II.   If you had to choose one *primary* barrier, what would that be?

Access – rural providers not having enough funding for ongoing maintenance and upgrades to their networks. It is not enough to just build the network, it takes ongoing funding.

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III.   What recommendations do you have to overcome these barriers?

Everyone wants choices and options but in reality, rural areas cannot afford multiple providers. That is why many rural communities no longer have grocery stores, gas stations and medical offices. You have to answer the question, "Do we want all Iowans to be offered comparable services at comparable prices no matter where they live?" If the answer is yes, then a favorable business environment needs to be created for rural providers. **That means rural needs to be treated differently**.

These are in no specific order and should be a joint federal and state initiative.
Ensure competitive equity on all levels.
Property taxes – ensure broadband providers are not paying more than others.
Reporting – reduce or eliminate unnecessary reporting.
Regulation – ensure rules are in place for providers to be paid fairly for the use of their networks.
Universal Service Fund – leverage the FCC to increase the contribution base.

IV.   Other comments?

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Name: Tom Conry
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Phone: 7127443131

I. What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state? 1. Uncertainy due to FCC Actions on recovery of already invested fiber to the home that allows economic growth and future uses of broadband. 2. ICN possible competition expansion to most lucrative users that currently are not authorized today. 3.

II. If you had to choose one *primary* barrier, what would that be? 1. Uncertainy due to FCC Actions on recovery of already invested fiber to the home that allows economic growth and future uses of broadband.

III. What recommendations do you have to overcome these barriers? Aid in convincing the FCC that carriers that have invested in networks to bring broadband to Iowan's need support for high cost areas, no matter the area. Possible state fund to aid in recovery to make broadband affordable.

IV. Other comments? Broadband maps for Iowa and the National Maps should be more accurate and have the same data to determine who has access and who does not, as well as those that subscribe to broadband either fixed, nomadic (cellular) or both to show true availability that will aid in understanding if adoption, or availability is the highest need to address.